GALANIN (1-15) ENHANCES THE BEHAVIOURAL EFFECTS OF ESCITALOPRAM IN THE FORCED SWIMMING TEST IN RATS

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The selective serotonergic reuptake inhibitors (SSRIs) are the most commonly used for the treatment of major depression. Recently, we observed that the Galanin N-terminal fragment (1-15) [GAL(1-15)] enhances the antidepressant-like effects induced by Fluoxetine (FLX) in the forced swimming test (FST) (Flores-Burgess et al, 2017). Therefore, we have analyzed the ability of GAL(1-15) to enhance the behavioural effects of Escitalopram (ESC), other SSRIs, in the FST and the tail suspension test (TST).

In the first set of experiments, groups of rats received three injections (23, 5 and 1 hour) before FST of two different doses of ESC (5mg/Kg or 7,5mg/Kg) or vehicle to perform a dose-response curve in the FST. Secondly, different groups of rats received three injections of ESC (7,5mg/Kg) and a single injection of a threshold dose of GAL(1-15) (1nmol) or aCSF 15 minutes before the FST and TST.

In the dose-response curve, ESC 5 mg/kg and 7,5 mg/kg significantly increase the swimming time ($p<0.05$), while lacking effects over immobility time. The threshold dose of GAL(1-15) 1nmol enhanced the antidepressant-like effects mediated by ESC 7,5mg/Kg, decreasing the immobility ($p<0.05$) and increasing the swimming time ($p<0.05$) in the FST. In TST, no differences were found between the treatments.

Our results indicate an interaction between GAL(1-15) and ESC in the FST and open up the possibility to use GAL(1-15) for a combination therapy with SSRIs as a depression treatment.

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